

IN THE CLAIMS

1. (currently amended) An electrical connector comprising:

at least one body comprising a passageway for a flow of a conductive fluid;

a first conductive pin in fluid communication with said passageway; and

a second conductive pin in fluid communication with said passageway, wherein when an electrical signal is introduced to said first pin, said conductive path is established through said conductive ink fluid serves as a conductive conduit between said first and second conductive pins when said conductive fluid flows through said passageway, whereby said electrical signal is carried to said second pin via said conductive fluid to detect a presence of the conductive fluid in said passageway.
2. (original) An electrical connector in accordance with claim 1 wherein at least one of said first and second conductive pins includes first and second parallel sides, said parallel sides oriented parallel to a direction of fluid flow of said conductive fluid.
3. (original) An electrical connector in accordance with claim 1 wherein at least one of said pins comprises a passageway therethrough for passage of said conductive fluid.
4. (original) An electrical connector in accordance with claim 1 wherein at least one of said first and second pins bifurcates fluid flow through said passageway.
5. (original) An electrical connector in accordance with claim 1 wherein a portion of one of said first and second pins is semi-cylindrical.
6. (original) An electrical connector in accordance with claim 1 further comprising a second body ganged to said first body, said second body comprising a passageway therethrough for transmission of conductive fluid, and a third and fourth conductive pin in fluid

communication with said passageway of said second housing for establishing a conductive path through conductive fluid in said second body.

7. (original) An electrical connector in accordance with claim 1 wherein said conductive fluid is ink.

8. (original) An electrical connector in accordance with claim 1 wherein said body comprises an ink tube.

9. (original) An electrical connector in accordance with claim 1 wherein at least one of said first and second contact pins comprises a square post.

10. (original) An electrical connector in accordance with claim 1 wherein said first and second pins are adapted for connection to a sensing unit to monitor a presence of fluid in said passageway.

11. (currently amended) An ink monitoring connector assembly comprising:

at least one body comprising a passageway for a flow of a conductive ink fluid;

a first conductive pin having a first portion in fluid communication with said passageway and a second portion external to said body; and

a second conductive pin having a first portion in fluid communication with said passageway and a second portion external to said body, wherein an electrical circuit may be established through said conductive ink fluid to carry an electrical signal between said first portions of said first and second conductive pins through said conductive ink fluid when said second portions of said first and second pins are coupled to a sensing unit.

12. (original) An electrical connector in accordance with claim 11 wherein at least one of said first and second conductive pins includes first and second parallel sides, said parallel sides oriented parallel to a direction of flow of said fluid.

13. (original) An electrical connector in accordance with claim 11 wherein at least one of said pins comprises a passageway therethrough for passage of said fluid.

14. (original) An electrical connector in accordance with claim 11 wherein at least one of said first and second pins bifurcates fluid flow through said passageway.

15. (original) An electrical connector in accordance with claim 11 wherein a portion of one of said first and second pins is semi-cylindrical.

16. (original) An electrical connector in accordance with claim 11 wherein at least one of said first and second contact pins comprises a square post.

17. (currently amended) An ink monitoring connector assembly comprising:

a body assembly comprising a plurality of passageways for a flow of a conductive ink fluid; and

a first conductive pin and a second conductive pin associated with each passageway of said body assembly, each of said first and second pins including a first portion and a second portion, said first portion in fluid communication with said respective passageway and said second portion external to said body;

wherein an electrical circuit may be established through said conductive ink fluid to carry an electrical signal through said conductive ink fluid between said first portion of said conductive pins corresponding to each passageway of said body assembly when said second portions of said first and second pins are coupled to a sensing unit.

18. (currently amended) An ink monitoring connector assembly in accordance with ~~claim 16~~ claim 17 wherein said body assembly comprises a plurality of ink tubes ganged to one another.

19. (currently amended) An ink monitoring connector assembly in accordance with ~~claim 16~~ claim 17 wherein at least one of said first and second conductive pins includes first and second parallel sides, said parallel sides oriented parallel to a direction of flow of said fluid.

20. (currently amended) An ink monitoring connector assembly in accordance with ~~claim 16~~ claim 17 wherein at least one of said pins comprises a passageway therethrough for passage of said fluid.

21. (currently amended) An ink monitoring connector assembly in accordance with ~~claim 16~~ claim 17 wherein at least one of said first and second pins bifurcates fluid flow through said passageway.

22. (currently amended) An electrical connector in accordance with ~~claim 16~~ claim 17 wherein a portion of one of said first and second pins is semi-cylindrical.

23. (currently amended) An electrical connector in accordance with ~~claim 16~~ claim 17 wherein at least one of said first and second contact pins comprises a square post.